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10/609,132

06/26/2003

Andrew J. Boeckle

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EXAMINER

HUYNH, LOUIS K

ART UNIT

PAPER NUMBER

3721

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/609,132	<b>Applicant(s)</b> BOECKLE ET AL.	
	<b>Examiner</b> Louis K. Huynh	<b>Art Unit</b> 3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-34,36-41 and 59-68 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-34,36-41 and 59-68 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This office action is responsive to the amendment filed on 04/03/2008.
2. The request to correct first inventor's name from BOECKLE to BOECKL filed on 05/15/2008 is acknowledged. While the request is being processed, the name of the first inventor will remain unchanged in several office correspondences, including this office action. Applicant is urged to continue monitoring.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3, 6-12, 14, 19-21, 31-34, 36-39, 59, 66 and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun'302 et al. (US 5,753,302).

- With respect to claims 1-3, 6, 7 and 66, Sun'302 discloses an acoustic dispenser (1710) that meets all of applicant's claimed subject matter; in particular, the acoustic dispenser of Sun'302 comprises: a hopper (1780) adapted to contain pharmaceutical powder, and a vibrating membrane (1760) that vibrates at a selected frequency, preferably at resonant frequency (col. 8, lines 41-54) and disturbs the air within the hopper (1780) to dispense the powder through an outlet of the hopper (where a receiving substrate 1790 is located according to FIG. 1). Regarding the functional language of the supply of powder being spaced from the vibratable member when the powder is present in the hopper and the vibratable

member is not vibrating and whereby the chamber may be filled by powder flowing through the outlet and into the chamber, the acoustic dispenser of Sun'302 is fully capable of holding the pharmaceutical powder on a separation membrane (mesh 1770) that is spaced from the vibratable membrane (1760) when the acoustic dispenser is turned up side down (from the illustration of FIG. 1), whereby pharmaceutical powder may flow through the separation membrane (1770) into the outlet of the hopper with or without the vibratable membrane being vibrated.

- With respect to claims 31-34, 36 and 38, Sun'302 teaches a method for filling a chamber that meets all of applicant's claimed subject matter; in particular, the method of Sun'666 comprises the steps of: providing a pharmaceutical powder in a hopper (1780), disturbing air in the hopper by vibrating a membrane (1760) in contact with the powder to dispense the powder through an outlet of the hopper (where a receiving substrate 1790 is located according to FIG. 1) and into a chamber such as a capsule (col. 15, lines 36-40). Note that prior to providing the pharmaceutical powder into the hopper (1780), the vibrating membrane is not vibrating and the pharmaceutical powder is provided separately and is not in contact with the vibrating membrane (1760); thus the step of providing a separation between the pharmaceutical powder and the vibrating membrane.
- With respect to claims 8 and 37, the membrane (1760) of the acoustic dispenser (1710) of Sun'302 is operated at audible range having known frequency of about

20Hz to about 200kHz, which includes the range of about 10Hz to about 1kHz as claimed.

- With respect to claims 9-11, the membrane (1760) in the acoustic dispenser of Sun'302 is the powder vibrating member that vibrates in contact with the powder, and the membrane vibrates in a direction generally parallel to a longitudinal axis of the speaker (1720).
- With respect to claims 12 and 14, the acoustic dispenser of Sun'302 is adapted to dispense pharmaceutical powder into capsules (col. 15, lines 36-40).
- With respect to claims 19-21, the hopper (1780) is an enclosure having side walls and a cover, wherein the cover comprises the membrane (1760) (FIG. 1).
- With respect to claim 66, the vibratable membrane is also considered to be the powder vibrating member that vibrates while in contact with the pharmaceutical powder.
- With respect to claim 67, the vibratable membrane (1760) is a part of a speaker (1720) which has a longitudinal axis through the center of the speaker, wherein the vibratable membrane (1760) is vibrating along the longitudinal axis through the center of the speaker.

5. Claims 1-3, 6, 8, 9, 11-16, 22-24, 28-34, 36, 37, 39, 40 and 60-65 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun'666 (US 6,168,666).

- With respect to claims 1-3, 6, 8, 22-24, Sun'666 discloses an acoustic dispenser (FIG. 1) that meets all of applicant's claimed subject matter; in particular, the

acoustic dispenser of Sun'666 comprises: a hopper (BDP) adapted to contain pharmaceutical powder (BEAD), and a vibrating membrane (CONE) spaced from the pharmaceutical powder and is adapted to vibrate at a selected frequency, preferably between 10-400 Hz (col. 15, line 62 – col. 19, line 6) to disturb the air within the hopper (BDP) in order to dispense the powder through the outlet of the hopper (BDP) and into chambers (BCZ).

- With respect to claims 9 and 11, the vibrating membrane (CONE) in the acoustic dispenser of Sun'666 is the powder vibrating member that vibrates in a direction generally parallel to a longitudinal axis of the speaker (S).
- With respect to claims 31-34, 36 and 37, Sun'666 teaches a method for filling a chamber that meets all of applicant's claimed subject matter; in particular, the method of Sun'666 comprises the steps of: providing a pharmaceutical powder (BEAD) in a hopper (BDP), providing a mesh (MESH) that separates the pharmaceutical powder (BEAD) and a vibrating membrane (CONE), disturbing air in the hopper by vibrating the vibrating membrane (CONE), and passing the powder through an outlet of the hopper into a chamber (BCZ); wherein the membrane (CONE) is preferably vibrated at a frequency of about 10-400 Hz to fluidize the powder.
- With respect to claims 12-16, 28-30 and 40, Sun'666 discloses a powder transport chuck (BTC) that includes chambers (BCZ) for holding substrate such as capsules (col. 10, line 62 – col. 11, line 8), and/or for receiving the powder and transporting

the powder to discharge the powder in creating pharmaceutical compositions (col. 1, lines 5-15).

- With respect to claim 39, the chambers to be filled in the method of Sun'666 include capsules which are normally sealed after being filled; hence, the step of sealing the chamber(s).
- With respect to claims 60-62, Sun'666 discloses an acoustic dispenser (FIG. 1) that meets all of applicant's claimed subject matter; in particular, the acoustic dispenser of Sun'666 comprises: a hopper (BDP) adapted to contain pharmaceutical powder (BEAD), and a vibrating membrane (CONE) spaced from the pharmaceutical powder and is adapted to vibrate at a selected frequency, preferably between 10-400 Hz (col. 15, line 62 – col. 19, line 6) to disturb the air within the hopper (BDP) in order to dispense the powder through the outlet of the hopper (BDP) and into movable chambers (BCZ) located on a powder transport chuck (BTC); wherein the chambers are movable between a powder collecting position and a powder ejecting position (col. 14, lines 55-62).
- With respect to claim 63, the vibrating membrane (CONE) in the acoustic dispenser of Sun'666 is the powder vibrating member.
- With respect to claim 64, the powder transport chuck (BTC) that includes chambers (BCZ) for receiving the powder and transporting the powder to discharge the powder in a controlled distribution as a metering means in creating pharmaceutical compositions (col. 1, lines 5-15).

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6. Claims 22 and 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Parks et al. (US 5,826,633).

- With respect to claims 22 and 25-30, Parks discloses an apparatus for filling a receptacle (12) including a hopper (18) adapted to contain pharmaceutical powder (28) and having an outlet (46), a first vibratable member (34) capable of disturbing air within the hopper (18) by vibrating a second vibratable member (screen member 30) in a longitudinal direction of the member (30) (col. 4, lines 34-36) that contact the powder (28), a metering chamber (56) disposed on a transfer wheel (16) that rotates between a receiving position and an ejecting position (FIGS 5-8), and a blister receptacle (12) for receiving the metered powder. Note that the first vibratable member (34) is not in contact with the powder (28) (FIG. 4) whether or not the vibratable member (34) is vibrating, and the first vibratable member (34) is capable of fluidizing the powder (28) by transmitting the vibration to the second vibratable member (screen member 30) when the first vibratable member (34) is vibrating (col. 10, lines 23-43).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



8. Claims 17, 18, 41 and 65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sun'666 in view of Sun'099 et al. (US 5,858,099).

- With respect to claims 17, 18, 41 and 65, the acoustic dispenser and method of Sun'666 teaches the chambers (BCZ) in the powder transport chuck (BTC) which meets all of applicant's claimed subject matter but lacks the specific teaching of the chamber(s) being in a rotating member and the step of rotating the chamber(s) from a powder receiving position to a powder ejecting position. However, Sun'099 discloses an acoustic dispenser and a method of filling chamber that utilize a rotatable powder transport chuck which receives powder from the acoustic dispenser in a receiving position, rotates to an ejecting position to deposit the powder into edible powder receptacles (FIG. 15). Therefore; it would have been obvious to a skilled person in the art, at the time of the invention, to have provided the acoustic dispenser of Sun'666 with a rotatable powder transport chuck, as taught by Sun'099, for transporting the pharmaceutical powder from the acoustic dispenser to an ejecting position in order to discharge the powder into edible receptacles.

9. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sun'302.

- The acoustics dispenser of Sun'302 meets all of applicant's claimed subject matter but lack the specific teaching of the powder vibrating member vibrating at a frequency of about 1000 Hz to about 180,000 Hz. The powder vibrating member is the vibratable membrane that can be vibrated in the known audible range of

about 20 Hz to about 20,000 Hz; it would have been obvious to a skilled person in the art to have operate the acoustic dispenser of Sun'302 such that the vibratable membrane vibrates at a frequency of 10,000 Hz, for example, which is well within the claimed range of frequency.

### ***Response to Arguments***

10. Applicant's arguments filed 04/03/2008 with respect to claims 1, 22, 31, 60 & 66 have been fully considered but they are not persuasive.

- Applicant contends that the reference to Sun'302 does not disclose a vibratable membrane that is spaced from the bulk supply of powder and an outlet through which powder can flow in a controlled manner as required in claim 1. This not found persuasive because: (1) the Sun'302 reference discloses an acoustic dispenser that structurally satisfies the claimed subject matter, including a hopper (1780) and a vibratable membrane (1760); (2) the acoustic dispenser of Sun'302 is full capable of holding the pharmaceutical powder on a mesh (1770) that is spaced apart from the vibratable membrane (1760) when the acoustic dispenser is turned up-side down from the illustration of FIG. 1 and when the vibrating membrane is not vibrating; and (3) the hopper (1780) does include an outlet beyond the mesh (1770) where a substrate (1790) to be coated is located and the pharmaceutical powder is dispensed through the outlet in a controlled manner depending on the frequency of vibratable membrane (1760). The rejection of

claim 1 and its dependent claims 2, 3, 6-12, 14 & 19-21 under 35 USC 102(b) as being anticipated by Sun'302 is still deemed proper and is maintained.

- Applicant contends that the reference to Sun'302 does not provide a separation between the powder and the vibratable membrane as required in claim 31. This is not found persuasive because prior to providing the pharmaceutical powder into the hopper (1780), the vibratable membrane (1760) is not vibrating and the pharmaceutical powder is provided separately into the hopper through inlet channels and is not in contact with the vibrating membrane (1760) before reaching the vibratable membrane; therefore, the method of Sun'302 does include the step of providing a separation between the pharmaceutical powder and the vibrating membrane. Note that the claim language does not explicitly states that the separation must be provided while powder is already settled in the hopper. The rejection of claim 31 and its dependent claims 32-34, 36-39 & 59 under 35 USC 102(b) as being anticipated by Sun'302 is still deemed proper and is maintained.
- Applicant contends that the reference to Sun'302 does not disclose a vibratable membrane disturbing a medium in the hopper and a powder vibrating member in contact with the powder as required in claim 66. This not found persuasive because the vibratable membrane (1760) serves to disturb the medium in the hopper and to physically vibrate the powder and is therefore considered to be equivalent to the claimed vibratable membrane and powder vibrating member.

The rejection of claim 66 and its dependent claim 67 under 35 U.S.C. 102(b) as being anticipated by Sun'302 is still deemed proper and is maintained.

- Applicant contends that the reference to Sun'666 does not disclose a vibratable membrane that is spaced from the bulk supply of powder and an outlet through which powder can flow in a controlled manner as required in claims 1 and 22.

This not found persuasive because: (1) the Sun'666 discloses an acoustic dispenser that structurally satisfies the claimed subject matter, including a hopper (BDP) for holding pharmaceutical powder (BEAD) and a vibratable membrane (CONE) that is spaced apart from the hopper (BDP); and (2) the hopper (BDP) does include an outlet where the pharmaceutical powder is dispensed toward the chamber (BCZ) in a controlled manner depending on the frequency of vibratable membrane (CONE). Applicant further argues that the Sun'666 discloses a metering pump instead of disclosing a vibratable membrane capable of disturbing a medium within the hopper is not understood and is irrelevant. The rejections of claims 1 & 22 and their respective dependent claims 2, 3, 6, 8, 9, 11-16, 23, 24 & 28-30 under 35 USC 102(b) as being anticipated by Sun'666 are still deemed proper and are maintained.

- Applicant contends that the reference to Sun'666 does not disclose a step of provide a separation between the powder and the vibratable membrane and a step of passing the powder through an outlet as required in claim 31. This is not found persuasive because: (1) the reference to Sun'666 clearly teaches that the vibrating membrane (CONE) vibrates to produce acoustic energy which disturbs the air in

the hopper (BDP) in order to fluidize the powder (BEAD) without contacting the powder (col. 13, lines 4-20; FIG. 1); and (2) the hopper (BDP) does include an outlet where the pharmaceutical powder is dispensed toward the chamber (BCZ) in a controlled manner depending on the frequency of vibratable membrane (CONE). The rejections of claim 31 and its dependent claims 32-34, 36, 37, 39 & 40 under 35 USC 102(b) as being anticipated by Sun'666 is still deemed proper and is maintained.

- Applicant contends that the reference to Sun'666 does not disclose an outlet and a chamber movable between a powder collecting position and a powder ejecting position as required in claim 60. This not found persuasive because: (1) the hopper (BDP) does include an outlet where the pharmaceutical powder is dispensed toward the chamber (BCZ) in a controlled manner depending on the frequency of vibratable membrane (CONE); and (2) the chamber (BCZ) is located on a transport chuck (BTC) that transport the chamber (BCZ) between a powder collecting position to a powder ejecting position (col. 14, lines 55-62). The rejections of claim 60 its dependent claims 61-65 under 35 USC 102(b) as being anticipated by Sun'666 are still deemed proper and are maintained.
- Applicant contends that the reference to Park does not disclose a vibratable member that fluidizes powder that is not in contact with the vibratable member as required in claim 22. This not found persuasive because Park discloses a filling apparatus that structurally and functionally meets all of the claimed subject matter

as pointed out in the previous office action, which is still deemed proper and repeated above.

- Applicant contends that the combination of Sun'666 and Sun'099 does not render claims 17, 18, 41 & 65 unpatentable because of the deficiencies with respect to independent claims 1, 31 & 60, that Sun'099 does not make up for the deficiencies, and that Sun'666 fails to disclose a rotatable powder transport chuck. This is not found persuasive because the reference to Sun'666 anticipates claims 1, 31 & 60 as discussed above, and that it would have been obvious to combine the teaching of Sun'666 and Sun'099 since they are commonly owned, thus is well within the knowledge of the ordinary skilled person in the art. The rejection of claims 17, 18, 41 & 65 under 35 USC 103(a) is still deemed proper and is maintained.
- Applicant contends that the reference to Sun'302 does not render claim 68 obvious because claim 68 depends on allowable claim 66, and that claim 68 recites a frequency range that is not taught by Sun'302. This is not found persuasive because the powder vibrating member is the vibratable membrane that can be vibrated in the known audible range of about 20 Hz to about 20,000 Hz; therefore, it would have been obvious to a skilled person in the art to have operated the acoustic dispenser of Sun'302 such that the vibratable membrane vibrates at a frequency of 10,000 Hz, for example, or any audible frequency of about 1000 Hz to about 20,000 Hz in order to propel the pharmaceutical powder, which operating frequency is well within the claimed frequency range of about

1000 Hz to about 180,000 Hz. The rejection of claim 68 under 35 USC 103(a) is still deemed proper and is maintained.

***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
12. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis K. Huynh whose telephone number is 571-272-4462. The examiner can normally be reached on M-F from 8:00AM to 3:00PM.
14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi I. Rada can be reached on 571-272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

June 12, 2008

/Louis K. Huynh/  
Primary Examiner  
Art Unit 3721